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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,173	12/08/2003	Peter Dwight Spohn	1035-O4239	2894
34456	7590	12/19/2005	EXAMINER	
TOLER & LARSON & ABEL L.L.P. 5000 PLAZA ON THE LAKE STE 265 AUSTIN, TX 78746			LEUNG, PHILIP H	
			ART UNIT	PAPER NUMBER
			3742	

DATE MAILED: 12/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/730,173	<b>Applicant(s)</b> SPOHN ET AL.	
	<b>Examiner</b> Philip H. Leung	<b>Art Unit</b> 3742	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 September 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21, 34, 35 and 40-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21, 34, 35 and 40-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>9-9-2005</u>  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-9, 11-14, 16-21 and 40-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erickson (US 2,839,651) or Uemura (JP 9-215605), in view of Guiles et al (US 6,056,844) or Stark et al (US 2002/0113066 A1) (all previously cited).

Erickson shows a heating belt 10 formed of rubber with conductive members 11 embedded in the rubber materials so that it is inductively heated by heating unit 20 having an induction heating coil 25 (see Figures 3 and 4 and col. 2, line 33 – col. 3, line 46). It uses conductive cables 11 or wires (col. 4, lines 59-66) instead of particles as the inductively heatable material with the polymer material as the belt composite material. Uemura also shows a heating belt made of a steel band 7 covered with rubber sheet 33 to be heated by induction coil 13 for heating food objects 11 (see Figures 1, 5 and 6 and the English translation). Uemura uses a rubber-covered steel band as the belt instead of inductively heatable particles. Guiles shows an induction heating device using a susceptor material comprising a polymer material mixed with induction heatable particles including materials as shown in Figures 3 and 5 (see Figures 1, 3 and 5 and col. 2, line 41 – col. 3, line 27). Stark also shows an induction heating device using inductively heatable particles including materials, such as, SrF powders, in a polymer material as an induction susceptor (see Figures 1, 3, 5, 6 and paragraphs [0016], [0019]- [0022] and [0027]-

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[0034]). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Erickson or Uemura to use inductively heatable particles with the polymer material of the belt for better heating temperature control and more uniform heating result, in view of the teaching of Guiles or Stark. The exact material of the particles and composition of the belt susceptor material would have been a matter of engineering variations of all the examples shown in Guiles or Stark following their teaching (see Guiles, col. 41 – col. 2, line 19 and Stark, paragraphs [007] – [0018]).

3. Claims 10, 15, 34, 35 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erickson (US 2,839,651) or Uemura (JP 9-215605), in view of Guiles et al (US 6,056,844) or Stark et al (US 2002/0113066 A1), as applied to claims 1-9, 11-14, 16-21 and 40-49 above, and further in view of Kinouchi et al (US 6,087,641) (previously cited).

Erickson or Uemura shows the belt is formed of rubber. It does not specifically state that the rubber is of silicone rubber. Kinouchi shows an induction heating device using an inductively heatable belt formed of a ferromagnetic metallic material with a silicone rubber coating (see Figures 1 and 2 and col. 4, line 33 – col. 5, line 11). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Erickson or Uemura to use any type of rubber material as the cover layer of the belt including silicone rubber for better adhesion prevention, in view of the teaching of Kinouchi.

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4. Applicant's arguments filed 9-9-2005 have been fully considered but they are not persuasive. All that is being claimed is a heating belt comprising a flexible support coated with a polymer and inductively-heatable particles. This is clearly taught by the prior art of record as set forth above. More particularly, inductively heatable heating belts are old and well known as taught by Erickson or Uemura. Erickson shows a heating belt formed of rubber with conductive members embedded in the rubber materials so that it is inductively heated. Uemura shows a cooking heating belt made of a steel band covered with rubber sheet to be heated by induction coil for heating food objects. It can be seen that both Erickson and Uemura show that it is well known to use a flexible material with conductive members embedded therein as an inductively heatable belt material. They use a different inductively heatable susceptor material. However, the use of polymer with inductively-heatable particles as an inductively heatable susceptor is also well known in the art as shown by the secondary references, namely, Guiles and Stark. Guiles shows an induction heating device using a susceptor material comprising a polymer material mixed with induction heatable particles as claimed. Guiles clearly teaches its invention "focuses on improving the induction heating process by optimizing the susceptor design for effective .....the invention uses ferromagnetic particles, "smart susceptors", which generate heat through hysteresis losses ..... Susceptors have the unique feature of "turning off" when they reach their Curie temperature" (col. 1, lines 41-52). In view of this and other advantages as set forth at col. 1, line 22 – col. 2, line 19 of Guiles, it would have been obvious to any ordinary skill in the art to modify the heating belt of Erickson or Uemura to add or substitute the conductive material in the belt with the "smart susceptor for better heating temperature control. Similarly, Stark also shows a similar susceptor material including materials, such as, SrF powders, in a polymer material as

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an inductively heatable material. In addition, Stark teaches the use of this “smart susceptor” material in induction cooking devices (Figures 8-10). Therefore, it can be seen the use of ferromagnetic particles in a polymer material as a susceptor in an induction heating or cooking device is very popular because of the well known “Curie temperature” characteristic. To apply this temperature control method in any induction heating device would have been blatantly obvious to an ordinary skill artisan with these references before him/her.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

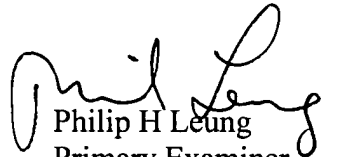
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip H Leung whose telephone number is (571) 272-4782. The examiner can normally be reached on flexible.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571) 272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Philip H Leung  
Primary Examiner  
Art Unit 3742

P.Leung/pl  
12-11-2005